

IN THE CLAIMS

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1. (Currently amended) A top-pumped optical thin film device comprising:
a substrate;
a lower cladding layer formed on the substrate;
a gain medium structure formed on the lower cladding layer and excited by absorbing pumping light; and
a light source disposed above the gain medium structure for pumping the gain medium structure by means of pump light transmitted downward from the light source external to a waveguide on the substrate directed downward therefrom,
wherein a portion of the gain medium structure, which is included in a beam spot of the light source, has a larger area than other portions of the gain medium structure.
 2. (Original) The top-pumped optical device as set forth in claim 1, further comprising an upper cladding layer formed on the gain medium structure,
wherein the upper cladding layer is made of a material which transmits the light irradiated from the pumping light source.
 3. (Original) The top-pumped optical device as set forth in claim 1,
wherein the gain medium structure does not exhibit great absorption property in a signal wavelength band of the optical device, but exhibits great absorption property in other wavelength bands.
 4. (Previously presented) The top-pumped optical device as set forth in claim 3,
wherein the gain medium is made of one selected from the group consisting of a macromolecular substance doped with excited elements and nano-crystals, a silica-based substance doped with excited elements and nano-crystals, a chalcogenide glass substance doped with excited elements, and a GaN or GaN-based substance doped with excited elements.
 5. (Cancelled)